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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**AIR QUALITY CLASS I PERMIT**

**COMPANY:** Apache Nitrogen Products, Inc.  
**FACILITY:** Ammonium Nitrate and Fertilizer Production Facility  
**PERMIT #:** 1000038  
**DATE ISSUED:** Proposed Final (prepared on December 3, 2001)  
**EXPIRY DATE:**

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**SUMMARY**

This operating permit is issued to Apache Nitrogen Products, Inc. (ANPI), the Permittee, for operation of the nitrogen products manufacturing facility, located in St. David, Cochise County, Arizona. Major operations at the facility include nitric acid production involving two ammonia oxidation plants (AOP-3 and AOP-4), an ammonium nitrate neutralizing plant (LAN), ammonium nitrate prill production (Prill Plant), and liquid fertilizer blending processes. Other auxiliary operations at the facility include three steam boilers, engine-driven generator and compressor, a brine concentrator plant, ammonia unloading, and products storage etc. Products manufactured at the facility include prilled ammonium nitrate, nitric acid, liquid ammonium nitrate, and various ammonium nitrate/nitric acid-based fertilizer products.

In regard to air pollution control, ANPI operates a selective catalytic reduction system to reduce nitrogen oxides (NO<sub>x</sub>) from AOP-3 tail gas exhaust, and a two-stage wet scrubber to remove ammonia and ammonium nitrate from LAN neutralizer exhaust gases. In addition, wet cyclones and baghouse are used in the Prill Plant to reduce particulate matter (PM) emissions.

The ANPI facility is classified as a Class I, Major Source, pursuant to A.A.C. R18-2-101.61. The potential emission rates of the following pollutants are greater than 100 tons per year: (i) particulate matter, and (ii) nitrogen oxides.

This Class I permit is issued in accordance with Title V of the Clean Air Act, and Title 49, Chapter 3 of the Arizona Revised Statutes. Applicable requirements for the ANPI operation are expressly identified in portions subtitled "Permit Shield" of this Permit. All definitions, terms, and conditions used in this Permit conform to those in the Arizona Administrative Code R18-2-101 et. seq. (A.A.C.) and 40 Code of Federal Regulations (CFR), except as otherwise defined in this Permit. Unless noted otherwise, references cited in the permit conditions refer to the A.A.C. All terms and conditions in this Permit are enforceable by the Administrator of the United States Environmental Protection Agency (U.S. EPA), except for those terms and conditions that have been designated as "State requirements".

## TABLE OF CONTENTS

<b>ATTACHMENT "A": GENERAL PROVISIONS</b>	Page 5
I. PERMIT EXPIRATION AND RENEWAL	Page 5
II. COMPLIANCE WITH PERMIT CONDITIONS	Page 5
III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE	Page 5
IV. POSTING OF PERMIT	Page 6
V. FEE PAYMENT	Page 6
VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE	Page 6
VII. COMPLIANCE CERTIFICATION	Page 6
VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS	Page 7
IX. INSPECTION AND ENTRY	Page 7
X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD	Page 8
XI. CHEMICAL ACCIDENT PREVENTION PROGRAM	Page 8
XII. REPORTING OF EXCESS EMISSIONS AND PERMIT DEVIATIONS	Page 8
A. Excess Emissions Reporting	Page 8
B. Permit Deviations Reporting	Page 9
C. Emergency Provision	Page 9
D. Extended Excursion	Page 10
XIII. RECORD KEEPING REQUIREMENTS	Page 10
XIV. REPORTING REQUIREMENTS	Page 10
XV. DUTY TO PROVIDE INFORMATION	Page 10
XVI. PERMIT AMENDMENT OR REVISION	Page 11
XVII. FACILITY CHANGE WITHOUT PERMIT REVISION	Page 11
XVIII. PERFORMANCE TESTING REQUIREMENTS	Page 12
XIX. PROPERTY RIGHTS	Page 13
XX. SEVERABILITY CLAUSE	Page 13
XXI. PERMIT SHIELD	Page 13
<b>ATTACHMENT "B": SPECIFIC CONDITIONS</b>	Page 14
I. GENERAL	Page 14
II. AFFECTED FACILITIES GOVERNED BY THE NEW SOURCE PERFORMANCE STANDARDS	Page 15
A. Section General	Page 15
B. Emissions Limits and Standards	Page 17
C. Air Pollution Control Requirements	Page 17
D. Monitoring, Recordkeeping and Reporting Requirements	Page 17
E. Performance Testing Requirements	Page 21
F. Permit Shield	Page 23
III. MORE REQUIREMENTS FOR AMMONIUM OXIDATION PROCESS NO. 3	Page 23
A. Section General	Page 23
B. Nitrogen Oxides	Page 23
C. Ammonia Emissions	Page 27
D. Permit Shield	Page 27

IV.	LIQUIFIED AMMONIUM NITRATE PLANT .....	Page 27
	A. Applicability .....	Page 27
	B. Visible/Particulate Matter Emissions .....	Page 27
	C. Ammonia Emissions .....	Page 31
	D. Permit Shield .....	Page 32
V.	AMMONIUM NITRATE PRILL PLANT .....	Page 32
	A. Applicability .....	Page 32
	B. Emissions Limits and Standards .....	Page 32
	C. Air Pollution Control Requirements .....	Page 33
	D. Monitoring, Recordkeeping and Reporting Requirements .....	Page 33
	E. Performance Test Requirements .....	Page 36
	F. Permit Shield .....	Page 36
VI.	FOSSIL-FUEL FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT .....	Page 37
	A. Applicability .....	Page 37
	B. Emission Limits and Standards .....	Page 37
	C. Periodic Monitoring and Record Keeping Requirements .....	Page 37
	D. Permit Shield .....	Page 38
VII.	STATIONARY ROTATING MACHINERY .....	Page 38
	A. Applicability .....	Page 38
	B. Emissions Limits and Standards .....	Page 39
	C. Monitoring, Recordkeeping, and Reporting Requirements .....	Page 39
	D. Permit Shield .....	Page 40
VIII.	STORAGE VESSELS FOR PETROLEUM LIQUIDS .....	Page 40
	A. Section General .....	Page 40
	B. Control Device Standards .....	Page 41
	C. Recordkeeping Requirements .....	Page 41
	D. Permit Shield .....	Page 41
IX.	NITRIC ACID STORAGE TANKS .....	Page 42
	A. Applicability .....	Page 42
	B. Visible Emissions Limit .....	Page 42
	C. Air Pollution Control Requirement .....	Page 42
	D. Monitoring, Recordkeeping and Reporting Requirements .....	Page 42
X.	COOLING TOWERS .....	Page 42
	A. Applicability .....	Page 42
	B. Emissions Limits and Standards .....	Page 43
	C. Monitoring, Recordkeeping and Reporting Requirements .....	Page 43
	D. Permit Shield .....	Page 44
XI.	NON-POINT SOURCES .....	Page 45
	A. Emission Limits and Standards .....	Page 45
	B. Monitoring, Recordkeeping, and Reporting Requirements .....	Page 46
	C. Permit Shield .....	Page 46
XII.	MOBILE SOURCES .....	Page 47
	A. Applicability .....	Page 47
	B. Emissions Standards .....	Page 47
	C. Permit Shield .....	Page 47

XIII.	OTHER PERIODIC ACTIVITIES .....	Page 47
A.	Emission Limits and Standards .....	Page 47
B.	Monitoring, Recordkeeping and Reporting Requirements .....	Page 49
C.	Permit Shield .....	Page 50
XIV.	ANHYDROUS AMMONIA UNLOADING AND STORAGE .....	Page 50

<b>ATTACHMENT “C” : EQUIPMENT LIST .....</b>	<b>Page 51</b>
Table C-1. Process and Control Equipment Description .....	Page 51
Table C-2. Stack Information .....	Page 55
Table C-3. Continuous Emission Monitoring Systems Information .....	Page 56

<b>ATTACHMENT “D”: AMMONIA EMISSIONS REDUCTION PLAN .....</b>	<b>Page 57</b>
I. ANHYDROUS AMMONIA QUALITY CONTROL .....	Page 57
II. DESIGN CRITERIA TO MINIMIZE FUGITIVES .....	Page 57
III. FUGITIVE EMISSIONS DETECTION AND CONTROL .....	Page 58
IV. RECORD KEEPING .....	Page 59

<b>ATTACHMENT “E”: AOP-3 AND AOP-4 ABSORPTION TOWER HYDROGEN PEROXIDE INJECTION OPERATING PROCEDURE .....</b>	<b>Page 60</b>
I. General Description .....	Page 60
II. Requirements .....	Page 60
III. Safety and Health .....	Page 61
IV. Overview of Major Steps .....	Page 61
V. Detailed Steps .....	Page 61
VI. Troubleshooting .....	Page 63
VII. Appendix .....	Page 63

## **ATTACHMENT "A": GENERAL PROVISIONS**

### **Air Quality Control Permit No. 1000038 For Apache Nitrogen Products, Inc.**

#### **I. PERMIT EXPIRATION AND RENEWAL**

[A.R.S. § 49-426(F), A.A.C. R18-2-304(C)(2), 306(A)(1), and 322]

- A. This Permit is valid for a period of five years from the date of issuance of the Permit.
- B. The Permittee shall submit an application for renewal of this Permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

#### **II. COMPLIANCE WITH PERMIT CONDITIONS**

[A.A.C. R18-2-306(A)(8)(a) and b, A.R.S. § 49-463, and A.R.S. §49-464]

- A. The Permittee shall comply with all the conditions contained in Attachments "A" through "E" of this Permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act (Act).
- B. Need to halt or reduce activity not a defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

#### **III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE**

[A.A.C. R18-2-306(A)(8)(c) and 321(A)]

- A. The Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The Permit shall be reopened and revised under any of the following circumstances:
  - 1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the Permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to R18-2-322(B). Any permit revision required pursuant to this subparagraph shall comply with provisions in R18-2-322 for permit renewal and shall reset the five year permit term.
  - 2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess

emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Director or the Administrator determines that the Permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Permit.
  4. The Director or the Administrator determines that the Permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under paragraph 1 above, affect only those parts of the Permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Attachment shall not result in a resetting of the five year permit term.

#### **IV. POSTING OF PERMIT**

[A.A.C. R18-2-315]

- A. The Permittee shall post this Permit, or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by the Permit shall be clearly marked with one of the following:
1. Current permit number.
  2. Serial number or other equipment number that is also listed in the Permit to identify that piece of equipment.
- B. A copy of the complete Permit shall be kept on the site.

#### **V. FEE PAYMENT**

[A.A.C. R18-2-326 and 306(A)(9)]

The Permittee shall pay fees to the Director pursuant to A.R.S. § 49-426(E) and A.A.C. R18-2-326.

#### **VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE**

[A.A.C. R18-2-327]

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

#### **VII. COMPLIANCE CERTIFICATION**

- A. The Permittee shall submit a compliance certification to the Director twice each year, which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than April 15th, and shall report the compliance status of the source during the period between September 16th of the previous year, and March 15th of the current year. The second certification shall be submitted no later than October 15th, and shall report the compliance status of the source during the period between March 16th and September

15th of the current year.

[A.A.C. R18-2-309(2)(a)]

The compliance certifications shall include the following:

1. Identification of each term or condition of the Permit that is the basis of the certification;  
[A.A.C. R18-2-309(2)(c)(i)]
2. Compliance status with each applicable requirement;  
[A.A.C. R18-2-309(2)(c)(ii)]
3. Whether compliance was based on continuous or intermittent data;  
[A.A.C. R18-2-309(2)(c)(iii)]
4. Each deviation and take it into account in the compliance certification;  
[40 CFR §70.6(c)(5)(iii)(C)]
5. Any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information;  
[40 CFR §70.6(c)(5)(iii)(B)]
6. Method(s) used for determining the compliance status of the source, currently and over the reporting period;  
[A.A.C. R18-2-309(2)(c)(iv)]
7. A progress report on all outstanding compliance schedules submitted pursuant to Section XII.D of this Attachment. Progress reports submitted with compliance certifications satisfy the reporting requirements of A.A.C. R18-2-309.5.d.  
[A.A.C. R18-2-309(5)(d)]

- B. A copy of all compliance certification for Class I permits shall also be submitted to the EPA Administrator.  
[A.A.C. R18-2-309(2)(d)]

#### **VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS** [A.A.C. R18-2-309(3)]

Any document required to be submitted by this Permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this part shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

#### **IX. INSPECTION AND ENTRY** [A.A.C. R18-2-309(4)]

The Permittee shall allow the Director or the authorized representative of the Director upon presentation of proper credentials to:

- A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the Permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the Permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Permit;
- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring

compliance with the Permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

## **X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD**

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Clean Air Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard. [A.A.C. R18-2-304(C)]

## **XI. CHEMICAL ACCIDENT PREVENTION PROGRAM**

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68. [40 CFR 68]

## **XII. REPORTING OF EXCESS EMISSIONS AND PERMIT DEVIATIONS**

A. Excess Emissions Reporting [A.A.C R18-2-310.01]

1. The Permittee shall report to the Director any emissions in excess of the limits established by this Permit. The report shall be in two parts as specified below:
  - a. Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions that includes all available information from Subsection A.2 of this Section.
  - b. Detailed written notification by submission of an excess emissions report within 72 hours of the notification paragraph a. above.
2. The excess emissions report shall contain the following information:
  - a. The identity of each stack or other emission point where the excess emissions occurred;
  - b. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
  - c. The date, time and duration or expected duration of the excess emissions;
  - d. The identity of the equipment from which the excess emissions emanated;
  - e. The nature and cause of such emissions;
  - f. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;
  - g. The steps that were or are being taken to limit the excess emissions; and



- h. If the source's permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.
3. In the case of continuous or recurring excess emissions, the notification requirements of this Section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to paragraphs 1 and 2 above of this subsection.

B. Permit Deviations Reporting

[A.A.C. R18-2-306(A)(5)]

1. A "deviation" means any situation in which an emissions unit fails to meet a permit term or condition.
2. The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the Permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when the Permittee first learned of the occurrence of the deviations.
3. All instances of deviations from permit requirements shall be clearly identified in the required semiannual monitoring report specified in Attachment "B", paragraph I.G, and shall be certified by the responsible official.

[A.A.C. R18-2-306(A)(5)(a)]

C. Emergency Provision

[A.A.C. R18-2-306(E)]

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the Permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the conditions under paragraph XII.C.3 below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
  - b. At the time of the emergency the permitted facility was being properly operated;
  - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the Permit; and
  - d. The Permittee submitted notice of the emergency to the Director by certified mail,

facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

#### D. Extended Excursion

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

[A.R.S. §49-426(I)(5)]

### **XIII. RECORD KEEPING REQUIREMENTS**

[A.A.C. R18-2-306(A)(4)]

- A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
  1. The date, place as defined in the Permit, and time of sampling or measurements;
  2. The date(s) analyses were performed;
  3. The name of the company or entity that performed the analyses;
  4. A description of the analytical techniques or methods used;
  5. The results of such analyses; and
  6. The operating conditions as existing at the time of sampling or measurement.
- B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the Permit.

### **XIV. REPORTING REQUIREMENTS**

[A.A.C. R18-2-306(A)(5)(a)]

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment “A”.
- B. Reports of excess emissions, permit deviations, and emergencies in accordance with Section XII of Attachment “A”.
- C. Other reports required by “Monitoring, Recordkeeping and Reporting Requirements” subsections of Attachment “B”.

### **XV. DUTY TO PROVIDE INFORMATION**

[A.A.C. R18-2-304(G) and 306(A)(8)(e)]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and

reissuing, or terminating the Permit or to determine compliance with the Permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the Permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

- B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

## **XVI. PERMIT AMENDMENT OR REVISION**

[A.A.C. R18-2-318, 319 and 320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVIII, Attachment "A" of this Permit, as follows:

- A. Administrative Permit Amendment (A.A.C. R18-2-318);
- B. Minor Permit Revision (A.A.C. R18-2-319);
- C. Significant Permit Revision (A.A.C. R18-2-320).

The applicability and requirements for such action are defined in the above referenced regulations.

## **XVII. FACILITY CHANGE WITHOUT PERMIT REVISION**

[A.A.C. R18-2-317]

- A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:
  - 1. The changes are not modifications under any provision of Title I of the Clean Air Act or under A.R.S. § 49-401.01(19).
  - 2. The changes do not exceed the emissions allowable under the Permit whether expressed therein as a rate of emissions or in terms of total emissions.
  - 3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.
  - 4. The changes satisfy all requirements for a minor permit revision under R18-2-319(A).
  - 5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Subsections (A) and (C) of this Section.
- C. For each such change under Subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Director and, for Class I permits, the Administrator, a

minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:

1. When the proposed change will occur.
2. A description of each such change.
3. Any change in emissions of regulated air pollutants.
4. The pollutants emitted subject to the emissions trade, if any.
5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.
6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.
7. Any permit term or condition that is no longer applicable as a result of the change.

## **XVIII. PERFORMANCE TESTING REQUIREMENTS**

[A.A.C.R18-2-312]

A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

### **B. Operational Conditions During Performance Testing**

Performance tests shall be conducted during operation at the full load of the unit under representative operational conditions unless other conditions are required by the applicable test method or in this Permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

C. Performance tests shall be conducted and data reduced in accordance with the test method and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312(B).

### **D. Performance Test Plan**

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Director, in accordance with the Arizona Testing Manual. This test plan must include among others identified in the Arizona Testing Manual the following:

1. test duration;
2. test location(s);
3. test method(s); and

4. source operation and other parameters that may affect test results.

#### E. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

#### F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Director's approval, be determined using the arithmetic mean of the other two runs. If the Director, or Director's designee, is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation which demonstrates good cause must be submitted.

#### G. Report of Final Test Results

A written report of the results of all required performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

### **XIX. PROPERTY RIGHTS**

[A.A.C. R18-2-306(A)(8)(d)]

This Permit does not convey any property rights of any sort, or any exclusive privilege.

### **XX. SEVERABILITY CLAUSE**

[A.A.C. R18-2-306(A)(7)]

The provisions of this Permit are severable. In the event of a challenge to any portion of this Permit, or if any portion of this Permit is held invalid, the remaining permit conditions remain valid and in force.

### **XXI. PERMIT SHIELD**

[A.A.C. R18-2-325]

Compliance with the conditions of this Permit shall be deemed compliance with the applicable requirements identified in Attachment "B" of this Permit. The Permit shield shall not apply to any changes made pursuant to Section XVII.B of this Attachment and Section XVIII of this Attachment.

## ATTACHMENT "B": SPECIFIC CONDITIONS

### Air Quality Control Permit No. 1000038 For Apache Nitrogen Products, Inc.

#### I. GENERAL

##### A. Abbreviations

1. "A.A.C. R18-2-xyz" stands for the Arizona Administrative Code, Title 18, Chapter 2, Article x, Section xyz.
2. "A.R.S. §49-xyz" stands for the Arizona Revised Statutes, Title 49, Section xyz.
3. "CFR" means the Code of Federal Regulations, with standard references in this Permit by Title and Part, so that "40 CFR 60" means "Title 40 of the Code of Federal Regulations, Part 60."
4. "NSPS" stands for the Standards of Performance for New Stationary Sources required under 40 CFR 60.
5. "SIP" stands for state implementation plan.
6. "COMS" stands for continuous opacity monitoring system.
7. "CEMS" stands for continuous emission monitoring system.

- B. The permit conditions or portions of the permit conditions which are material pursuant to A.A.C. R18-2-331 and A.R.S. §49-464 are indicated by double underlined and italicized print.

##### C. Definitions

1. "Process source" means the last operation or process which produces an air contaminant resulting from either:  
[A.A.C. R18-2-701(22)]
  - a. The separation of the air contaminants from the process material, or
  - b. The conversion of constituents of the process materials into air contaminants which is not an air pollution abatement operation.
2. "Fugitive emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.  
[A.A.C. R18-2-101(49)]
3. "Nonpoint source" means a source of air contaminants which lacks an identifiable plume or emission point.  
[A.A.C. R18-2-101(77)]
4. "New source" means any stationary source of air pollution which is subject to an applicable new source performance standard under Article 9 of Arizona Administrative Code, Title 18, Chapter 2.  
[A.A.C. R18-2-101(73)]
5. "Existing source" means any source which does not have an applicable new source

- D. Unless otherwise specified in the applicable section of this Attachment, all equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this Permit shall at all times be maintained in good working order and be operated as efficiently as practicable so as to minimize air pollutant emissions.

[Condition III of Installation Permits Nos. 1229 and 25017 and Operating Permit No. M31143P0-98]

- E. For the purpose of this Permit, the EPA Reference Method 9 reading shall be defined as an average of 24 consecutive opacity observations recorded at 15-second intervals. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24.

[A.A.C. R18-2-306.A.3.c and 40 CFR 60, Appendix A, Method 9, Section 2.5]

- F. Within 180 days of issuance of this Permit, the Permittee shall have onsite or on-call at all times, a person that is certified in EPA Reference Method 9.

[A.A.C. R18-2-306.A.3.c]

- G. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit summary reports of any monitoring required by Attachment "B" and performed over the same reporting period as that of the compliance certifications. All instances of deviations from requirements of the Permit shall be clearly identified in the reports.

[A.A.C. R18-2-306.A.5.a]

## **II. AFFECTED FACILITIES GOVERNED BY THE NEW SOURCE PERFORMANCE STANDARDS**

### **A. Section General**

1. Applicability [40 CFR 60.70(a)]

The following nitric acid production units are affected under this Section:

- a. Ammonium Oxidation Process No. 3 (AOP-3), and
- b. Ammonium Oxidation Process No. 4 (AOP-4).

2. Definitions

- a. For each nitric acid production unit affected under this Section, "startup" means the setting in operation of the unit and associated equipment for any purpose. Startup ends 30 minutes after the compressor anti-surge valves to the relevant unit are closed.

[40 CFR 60.2]

- b. For each nitric acid production unit affected under this Section, "shutdown" means the cessation of operation of the unit and associated equipment for any purpose. Shutdown begins when the ammonia flow to the gauze of the relevant unit is stopped. [40 CFR 60.2]

- c. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment, process equipment or a process to operate in a normal and usual manner, but

does not include failures that are caused by poor maintenance, careless operation or any other upset condition or equipment breakdown which could have been prevented by the exercise of reasonable care. [40 CFR 60.2]

- d. "Continuous emission monitoring system (CEMS)" means the total equipment used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions. [40 CFR 60.2]
  - e. Nitric acid production unit means any facility producing weak nitric acid by either the pressure or atmospheric pressure process. [40 CFR 60.71(a)]
  - f. Weak nitric acid is defined as a nitric acid that is 30 to 70 percent in strength. [40 CFR 60.71(b)]
- 3. For the purpose of this Section, compliance with standards in this Section, other than opacity standards, shall be determined in accordance with performance tests. The performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in Subsection E of this Section, "Performance Testing Requirements". [40 CFR 60.11(a) and 60.8(b)]
  - 4. For the purpose of this Section, compliance with an opacity standard in this Section shall be determined by conducting observations in accordance with EPA Reference Method 9 in 40 CFR Part 60, Appendix A, or any alternative method that is approved by the Director, or as provided in paragraph 5 below. [40 CFR 60.11(b)]
  - 5. The Permittee may submit, for the purposes of compliance with an opacity standard in this Section, continuous opacity monitoring system (COMS) data results produced during any performance test required under this Section in lieu of the Method 9 observation data. The Permittee using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. [40 CFR 60.11(e)(5)]
  - 6. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practical, maintain and operate any affected unit under this Section including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used for these facilities shall be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]
  - 7. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this Section, nothing in this Section shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with such standards if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g)]

## **B. Emissions Limits and Standards**



1. Opacity

At all times except for periods of startup, shutdown, and malfunction as defined in paragraphs II.A.2.a, b and c of this Section, the Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 and/or AOP-4 any gases which exhibit 10 percent opacity, or greater. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with the opacity standard.

[ 40 CFR 60.72(a)(2), 60.11(c) and 60.11(e)(1)]

2. Nitrogen Oxides

The Permittee shall not cause or allow to be discharged into the atmosphere from any affected unit under this Section any gases which contain nitrogen oxides (NO<sub>x</sub>), expressed as nitrogen dioxide (NO<sub>2</sub>), in excess of 1.5 kg per metric ton of acid produced (3.0 lb per ton), the production being expressed as 100 percent nitric acid. Emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit.

[40 CFR 60.8(c) and 60.72(a)(1)]

**C. Air Pollution Control Requirements**

1. During startups of AOP-3 and AOP-4, the Permittee shall operate the Hydrogen Peroxide System in accordance with "AOP-3 and AOP-4 Absorption Tower Hydrogen Peroxide Injection Operating Procedure", Attachment "E" of this Permit to minimize startup nitrogen oxides emissions.

[A.A.C. R18-2-306(A)(2)]

2. The Permittee shall operate and maintain the Selective Catalytic Reduction (SCR) system installed at the AOP-3 tail gas system, namely Fume Abator, to remove remaining nitrogen oxides before venting the tail gas to the atmosphere.

[Installation Permit 1229 as modified by Significant Revision 1001029 Condition XII.G]

**D. Monitoring, Recordkeeping and Reporting Requirements**

1. Opacity Monitoring

a. Tail gas COMS

The Permittee shall install and certify within 180 days from the effective date of this permit, and calibrate, maintain and operate thereafter, the continuous opacity monitoring systems (COMS) on AOP-3 and AOP-4 to monitor and record opacity of the exhaust gases. The span of the systems shall be set at 80 to 100 percent opacity. [A.A.C. R18-2-306(A)(3)(c)]

- b. The COMS under this section shall meet 40 CFR 60, Appendix B, "Performance Specification 1 - Specification and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources":

[A.A.C. R18-2-A9.3.1.1]

- (1) Apparatus
- (2) Installation Specifications
- (3) Design and Performance Specifications
- (4) Design Specifications Verification Procedure

(5) Performance Specifications Verification Procedure

(6) Equations

c. The COMS under this section shall meet the following quality assurance requirements:

(1) Calibration checks

[A.A.C. R18-2-A9.4]

The Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure prescribed by the manufacturer.

(2) Zero and span drift adjustments

[A.A.C. R18-2-A9.4]

(a) The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 2% opacity.

(b) The optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments, except for systems using automatic zero adjustments.

(c) For systems using automatic zero adjustments, the optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4% opacity.

(3) System checks

[A.A.C. R18-2-A9.4.3]

The Permittee shall, as minimum procedures, apply a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. All procedures applied shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly.

(4) Minimum frequency of operation

[A.A.C. R18-2-A9.5.1]

Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, the COMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 10-second period.

(5) Data reduction procedures

[A.A.C. R18-2-A9.8]

(a) The Permittee shall reduce all data from the COMS to 6-minute averages. Six-minute opacity averages shall be calculated from 24 or more data points equally spaced over each 6-minute period.

(b) Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under the previous paragraph. An arithmetic or integrated average of all data may be used.

## 2. Nitrogen Oxides Monitoring

### a. Tail gas NO<sub>x</sub> CEMS

The Permittee shall calibrate, maintain and operate the continuous emission monitoring systems (CEMS) installed on AOP-3 and AOP-4 for measuring exhaust gas nitrogen oxides. The span value of the systems shall be 500 ppm of NO<sub>2</sub>. The systems shall meet the performance specification set forth under 40 CFR Part 60, Appendix B, "Performance Specification 2 - Specifications and Test Procedures for SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitoring Systems in Stationary Sources". The pollutant gas mixtures under the Specification shall be NO<sub>2</sub>. [Installation Permit No. 1229 and 40 CFR 60.13(a) and 60.73(a)]

### b. Acid production rate

The Permittee shall record, for each affected unit under this Section, the daily production rate expressed as 100 percent nitric acid and hours of operation. [40 CFR 60.73(c)]

### c. Each NO<sub>x</sub> CEMS under this Section shall meet the following quality control requirements:

#### (1) Calibration Drift (CD) Checks

The Permittee shall check the zero (or low-level value between 0 and 20% of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure prescribed by the manufacturer. The pollutant gas mixtures for the calibration checks shall be NO<sub>2</sub>. [40 CFR 60.13(d)(1) and 60.73(a)]

#### (2) Zero and Span Drift Adjustments

(a) The zero and span shall, as a minimum, be adjusted whenever the 24-hr zero drift or 24-hr span drift exceeds 25 ppm. [40 CFR 60.13(d)(1)]

(b) The CEMS shall allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. [40 CFR 60.13(d)(1)]

#### (3) Minimum frequency of operation

[40 CFR 60.13(e)(2)]

Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

#### (4) Data reduction procedures

[40 CFR 60.13(h)]

(a) The Permittee shall reduce all data from the CEMS to 1-hour averages. The 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period.

(b) Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed

under the previous paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant).

d. NO<sub>x</sub> CEMS Quality Assurance Requirements

- (1) In conjunction with the quality control procedures specified in II.D.2.c above, the Permittee shall implement a quality assurance (QA) program for AOP-3 NO<sub>x</sub> CEMS as prescribed in III.B.2.b of this Attachment. [Installation Permit No. 1229 - Condition XII.F.4]
- (2) In addition to the quality control procedures specified in II.D.2.c above, the Permittee shall conduct or cause to be conducted, on an annual basis, a performance evaluation of the AOP-4 NO<sub>x</sub> CEMS for NO<sub>x</sub> using 40 CFR Part 60, Appendix B, "Performance Specification 2 - Specifications and Test Procedures for SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitoring Systems in Stationary Sources". The Permittee shall furnish the Department a written report of the performance evaluation. [A.A.C. R18-2-306(A)(3)(d)]

3. Recordkeeping and Reporting

- a. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected unit under this Section; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]
- b. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this Section recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports and records. [40 CFR 60.7(f) and A.A.C. R18-2-306(A)(4)(b)]
- c. Quarterly excess emissions and monitoring systems performance reports
  - (1) The Permittee shall submit an excess emissions and monitoring systems performance report and a summary report form to the Department for every calendar quarter. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and the continuous monitoring system downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emissions and monitoring systems performance report need not be submitted unless requested by the Department. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. [40 CFR 60.7(c) and 60.7(d)]
  - (2) The summary report form submission required in the preceding paragraph (1) shall contain the information and be in the format set forth in 40 CFR 60.7(d). Written reports of excess emissions and monitoring systems performance shall include the following information: [40 CFR 60.7(c)]

- (a) The magnitude of excess emissions computed, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
  - (b) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected unit. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
  - (c) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - (d) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- (3) Excess emission definitions

Periods of excess emissions that shall be reported under II.D.3.c(1) and (2) above are defined as follows:

(a) Opacity

Opacity excess emissions are defined as any six-minute period during which the average opacity, as measured by the COMS prescribed in paragraph II.D.1.a, exceeds the 10 percent opacity standard required under paragraph II.B.1.

[A.A.C. R18-2-306(A)(3)(c)]

(b) Nitrogen oxides

NO<sub>x</sub> excess emissions are defined as any 3-hour period during which the average nitrogen oxides emissions (arithmetic average of three contiguous 1-hour periods) as measured by any continuous monitoring systems described in paragraph II.D.2.a above exceed the standard set forth in paragraph II.B.2 of this Section.

[40 CFR 60.73(e)]

d. Emission deviations reporting requirements

[A.A.C. R18-2-306.A.5.b]

In addition to the quarterly reporting required under Condition II.D.3.c above, the Permittee shall report emissions exceeding an emission limitation or standard as deviations in accordance with Condition XII.B of Attachment "A of this Permit.

**E. Performance Testing Requirements**

[A.A.C. R18-2-306(A)(3), -312(A), -312(B), and 40 CFR 60.74]

1. Testing Frequency

[Installation Permit No. 1229 and A.A.C. R18-2-306.A.3.c]

- a. Within 180 days after issuance of this Permit, the Permittee shall conduct a performance test for oxides of nitrogen on the exhaust gases from each affected unit under this Section.

- b. The Permittee shall conduct subsequent performance tests annually for oxides of nitrogen on the exhaust gases from each affected unit under this Section.

## 2. Test Methods and Procedures

The Permittee shall determine compliance with the NO<sub>x</sub> standard in paragraph II.B.2 of this Section as follows:

- a. The emission rate (E) of NO<sub>x</sub> shall be computed for each run using the following equation:

$$E = (C_s Q_{sd}) / (P K)$$

where:

E = emission rate of NO<sub>x</sub> as NO<sub>2</sub>, kg/metric ton (lb/ton) of 100 percent nitric acid.

C<sub>s</sub> = concentration of NO<sub>x</sub> as NO<sub>2</sub>, g/dscm (lb/dscf).

Q<sub>sd</sub> = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P = acid production rate, metric ton/hr (ton/hr) of 100 percent nitric acid.

K = conversion factor, 1000 g/kg (1.0 lb/lb).

- b. EPA Reference Method 7 shall be used to determine the NO<sub>x</sub> concentration of each grab sample. EPA Reference Method 1 shall be used to select the sampling site, and the sampling point shall be the centroid of the stack or duct or at a point no closer to the walls than 1 m (3.28 ft). Four grab samples shall be taken at approximately 15-minute intervals. The arithmetic mean of the four sample concentrations shall constitute the run value (C<sub>s</sub>).
- c. EPA Reference Method 2 shall be used to determine the volumetric flow rate (Q<sub>sd</sub>) of the effluent gas. The measurement site shall be the same as for the NO<sub>x</sub> sample. A velocity traverse shall be made once per run within the hour that the NO<sub>x</sub> samples are taken.
- d. The methods of paragraph II.D.2.b of this Section shall be used to determine the production rate (P) of 100 percent nitric acid for each run. Material balance over the production system shall be used to confirm the production rate.
- e. The Permittee may use Method 7A, 7B, 7C, or 7D as alternatives to the Method 7. If Method 7C or 7D is used, the sampling time shall be at least 1 hour.
- f. The Permittee shall use the procedure in II.E.3 below to determine the conversion factor for converting the monitoring data to the units of the standard.

## 3. Establishment of Conversion Factor

[40 CFR 60.73(b)]

The Permittee shall establish as follows a NO<sub>x</sub> emissions conversion factor for each affected unit for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, or lb/ton of acid produced).

- a. The conversion factor shall be established by measuring emissions with the CEMS concurrent with measuring emissions using the applicable reference method tests.
- b. The conversion factor shall be determined by dividing the reference method test data averages by the monitoring data averages to obtain a ratio expressed in units of the

applicable standard to units of the monitoring data, i.e., kg/metric ton per ppm (lb/ton per ppm), using only that portion of the continuous monitoring emission data that represents emission measurements concurrent with the reference method test periods.

- c. The conversion factor shall be re-established during any performance test required by II.E.1 of this Section or any continuous monitoring system performance evaluation under 40 CFR 60.13(c).

#### **F. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of 40 CFR 60.72(a)(1), 40 CFR 60.72(a)(2), 40 CFR 60.73(a), 40 CFR 60.73(b), 40 CFR 60.73(c), 40 CFR 60.73(e), 40 CFR 60.74(a), 40 CFR 60.74(b)(1) through (4), and 40 CFR 60.74(d) in effect on the date of permit issuance.

### **III. MORE REQUIREMENTS FOR AMMONIUM OXIDATION PROCESS NO. 3**

#### **A. Section General**

##### **1. Applicability**

The requirements of this Section are applicable to the Ammonium Oxidation Process No. 3 (AOP-3) in addition to the requirements set forth in Section II of this Attachment.

##### **2. Definitions**

- a. "Continuous emission rate monitoring system (CERMS)" means the total equipment required for the determination and recording of the pollutant mass emission rate (in terms of mass per unit of time). [40 CFR 60, Appendix B, Performance Specification 6.2.1]
- b. "Relative accuracy (RA)" means the absolute mean difference between the gas concentration or emission rate determined by the continuous emission monitoring system (CEMS) and the value determined by the reference methods (RM) plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the RM tests or the applicable emission limit. [40 CFR 60, Appendix B, Performance Specification 2.2.5]
- c. "Calibration drift (CD)" means the difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place. [40 CFR 60, Appendix B, Performance Specification 2.2.6]

#### **B. Nitrogen Oxides**

##### **1. Emission Limits and Standards**

The Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 any gases which contain NOx, expressed as NO<sub>2</sub>, in excess of 8.60 pounds per hour and 37.67 tons per year. Compliance with the maximum NOx emission limits shall be based on a 120-day rolling average calculated every clock hour in pounds per hour as determined by the NOx

continuous emission rate monitoring system (CERMS) prescribed under III.B.2.a below.  
[Installation Permit 1229, Conditions XII.B.3 and XII.B.4.a]

## 2. Monitoring, Recordkeeping and Reporting Requirements

### a. AOP-3 NO<sub>x</sub> CERMS

- (1) The Permittee shall employ the NO<sub>x</sub> monitor specified in paragraph II.D.2.a of this Attachment to measure exhaust gas nitrogen oxides concentrations at the AOP-3 discharge stack. [Installation Permit No. 1229-Condition XII.F.1.a, 40 CFR 60.13(a) and 60.73(a)]
- (2) The Permittee shall calibrate, maintain and operate the flow monitor installed at the AOP-3 discharge stack to measure volumetric flow rates of the exhaust gas. The flow monitor shall meet the performance specification set forth under 40 CFR Part 60, Appendix B, "Performance Specification 6 - Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources".

[ Installation Permit No. 1229-Condition XII.F.1.b]

- b. In conjunction with the quality control procedures specified in Condition II.D.2.c of this Attachment, the Permittee shall implement a quality assurance (QA) program as follows for the AOP-3 NO<sub>x</sub> monitor prescribed under III.B.2.a(1) of this Section. The QA program shall be at least as stringent as required by 40 CFR 60, Appendix F, "Quality Assurance Procedures".

[Installation Permit No. 1229-Condition XII.F.4]

#### (1) Quality control (QC) requirements

[40 CFR 60, Appendix F.3]

The Permittee shall develop and implement a QC program. As a minimum, the QC program shall include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

- (a) Calibration of the NO<sub>x</sub> monitor.
- (b) Calibration drift determination and adjustment of the NO<sub>x</sub> monitor.
- (c) Preventive maintenance of the NO<sub>x</sub> monitor (including spare parts inventory).
- (d) Data recording, calculations, and reporting.
- (e) Accuracy audit procedures including sampling and analysis methods.
- (f) Program of corrective action when the NO<sub>x</sub> monitor is malfunctioning.

The written procedures shall be kept on record and available for inspection by the Department.

#### (2) Calibration drift (CD) assessment

[40 CFR 60, Appendix F.4.2 and 3]

- (a) If the NO<sub>x</sub> monitor is set to automatically adjust the data to the corrected calibration values (e.g., microprocessor control), the Permittee shall program it to record the unadjusted concentration measured in the CD prior to resetting the calibration, if performed, or record the amount of adjustment.
- (b) If the NO<sub>x</sub> monitor is out-of-control in terms of the excessive CD as defined in 40 CFR 60, Appendix F.4.3, the Permittee shall take necessary corrective action. Following corrective action, the Permittee shall repeat the CD checks as described



in II.D.2.c of this Attachment. During the out-of-control period, the NO<sub>x</sub> monitor data may not be used in calculating emission compliance.

(3) Data accuracy assessment

(a) NO<sub>x</sub> Monitor Auditing

[40 CFR 60, Appendix F.5.1]

The Permittee shall conduct audits for the AOP-3 NO<sub>x</sub> monitor of III.B.2.a(1), at least once each calendar quarter to determine if the monitor is operating within the specifications set forth in 40 CFR Part 60, Appendix B, "Performance Specification 2 - Specifications and Test Procedures for SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitoring Systems in Stationary Sources". Successive quarterly audits shall occur no closer than 2 months. The audits shall be conducted as follows:

i) Relative accuracy test audit (RATA)

[40 CFR 60, Appendix F.5.1.1]

The Permittee shall conduct the RATA at least once every four calendar quarters in accordance with the relative accuracy test procedures specified in 40 CFR 60, Appendix B, Performance Specification 2, Section 7 and Performance Specification 6, Section 5. In conducting the RATA tests, EPA Reference Method 7 shall be used for NO<sub>x</sub> concentration and Method 2 for volumetric flow rate. In addition, the Permittee shall analyze the appropriate performance audit samples received from EPA as described in the Method 7.

ii) Cylinder gas audit (CGA)

[40 CFR 60, Appendix F.5.1.2]

The Permittee shall conduct a CGA in three of four calendar quarters, but in no more than three quarters in succession in accordance with the procedures as specified in 40 CFR 60, Appendix F.5.1.2.

iii) Relative accuracy audit (RAA)

[40 CFR 60, Appendix F.5.1.3]

As an alternative to CGA, the Permittee may conduct the RAA in three of four calendar quarters, but in no more than three quarters in succession. To conduct a RAA, the Permittee shall follow the relative accuracy test procedures as specified in 40 CFR 60, Appendix B, Performance Specification 2, Section 7, except that only three sets of measurement data are required. Analyses of EPA performance audit samples are also required.

(b) Excessive audit inaccuracy

[40 CFR Part 60, Appendix F.5.2]

If the NO<sub>x</sub> monitor is out-of-control in terms of excessive audit inaccuracy as defined in 40 CFR Part 60, Appendix F, Subsections 5.2.1 and 5.2.3, the Permittee shall take necessary corrective action to eliminate the problem. Following corrective action, the Permittee shall audit the NO<sub>x</sub> monitor with a relative accuracy test audit, cylinder gas audit, or relative accuracy audit, as prescribed in III.B.2.b(3)(a) above. If the audit results show the NO<sub>x</sub> monitor to be out-of-control, the Permittee shall report both the audit showing the NO<sub>x</sub> monitor to be out-of-control and the results of the audit following corrective action showing the NO<sub>x</sub> monitor to be operating within the specifications set forth in 40 CFR Part 60,

Appendix B, "Performance Specification 2 - Specifications and Test Procedures for SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitoring Systems in Stationary Sources".

(c) Repeated excessive audit inaccuracy

[40 CFR Part 60, Appendix F.5.3]

Whenever excessive audit inaccuracies as defined in 40 CFR Part 60, Appendix F, Subsections 5.2.1 and 5.2.3, occur for two consecutive quarters, the Permittee shall revise the QC procedures as described in III.B.2.b(1), or modify or replace the NO<sub>x</sub> monitor to correct the deficiency causing the repeated excessive inaccuracy.

c. Data Assessment Report

[40 CFR Part 60, Appendix F.7]

Along with the quarterly reporting submittal described in Subsection II.D.3.c of this Section, the Permittee shall also submit as a Data Assessment Report (DAR) the results of calibration drift assessment and audit accuracy, and include one copy of this DAR for each quarterly audit for the NO<sub>x</sub> monitor. The DAR shall, as a minimum, contain the following information:

- (1) The Permittee name and address.
  - (2) Identification and location of the NO<sub>x</sub> monitor.
  - (3) Manufacturer and model number of the NO<sub>x</sub> monitor.
  - (4) Assessment of the NO<sub>x</sub> monitor data accuracy and date of assessment as determined by a RATA, RAA, or CGA described in III.B.2.b(3)(a) above including the relative accuracy for the RATA, the accuracy of the NO<sub>x</sub> monitor for the RAA or CGA, the reference method results, the cylinder gases certified values, the NO<sub>x</sub> monitor system responses, and the calculations results as defined in 40 CFR Part 60, Appendix F, Section 6. If the accuracy audit results show the NO<sub>x</sub> monitor to be out-of-control, the Permittee shall report both the audit results showing the NO<sub>x</sub> monitor to be out-of-control and the results of the audit following corrective action showing the NO<sub>x</sub> monitor to be operating within specifications.
  - (5) Results from EPA performance audit samples and the applicable reference methods.
  - (6) Summary of all corrective actions taken when the NO<sub>x</sub> monitor was determined out-of-control, as described in Subsections III.B.2.b(2) and III.B.2.b(3).
- d. At the time the NO<sub>x</sub> monitor RATA testing is conducted pursuant to paragraph III.B.2.b(3)(i) of this Section, the Permittee shall also conduct a performance evaluation for the AOP-3 flow monitor described in paragraph III.B.2.a(2) of this Section. The performance evaluation shall be conducted for flow rate using 40 CFR Part 60, Appendix B, "Performance Specification 6 - Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources". The Permittee shall furnish the Department a written report of the performance evaluation. [A.A.C. R18-2-306(A)(3)(c)]
- e. The Permittee shall maintain a file of all measurements taken by the NO<sub>x</sub> monitor and flow monitor as required under this Section, all calibration drift assessment and performance evaluations done for the monitors, all adjustments and maintenance performed on the

monitors, and all data assessment reports. The file shall be retained in accordance with Section XIII of the Attachment "A". [A.A.C. R18-2-306(A)(4)(b)]

### **C. Ammonia Emissions**

#### **1. Emission Limits and Standards**

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from AOP-3 any gases which contain ammonia in excess of 3.00 pounds per hour and 13.14 tons per year. [Installation Permit 1229 as modified by Significant Revision 1001029 Condition XII.B.3]
- b. The Permittee shall maintain and operate AOP-3 in such a manner as to control the emissions of ammonia and to minimize off-plant odors. [Permit No. 1229 Condition XII.C]

#### **2. Performance Testing Requirements**

[A.A.C. R18-2-306(A)(3), -312(A), and -312(B)]

##### **a. Testing Frequency**

- (1) Within 180 days after issuance of this Permit, the Permittee shall conduct a performance test for ammonia on the exhaust gases from AOP-3.
- (2) Subsequent performance tests for ammonia being emitted in the exhaust gases of AOP-3 shall be conducted annually.

##### **b. Testing Methods**

Performance tests shall be conducted and data reduced in accordance with EPA Reference Method 206.

### **D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of Installation Permit 1229 Conditions XII.B.3, XII.B.4.a, XII.C, XII.E.1, XII.F.1.a and b, and XII.F.4 in effect on the date of permit issuance.

## **IV. LIQUIFIED AMMONIUM NITRATE PLANT**

### **A. Applicability**

The conditions of this Section apply to the Liquified Ammonium Nitrate (LAN) Plant, which consists of the ammonium nitrate neutralizer, wet scrubber and associated equipment.

### **B. Visible/Particulate Matter Emissions**

#### **1. Emissions Limits and Standard**

##### **a. Opacity**

The Permittee shall not cause or allow to be discharged into the atmosphere from the

Neutralizer any plume or effluent, the opacity of which is greater than 40% as determined by EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of the visible emissions requirement, such exceedance shall not constitute a violation. [A.A.C. R18-2-702(B) and 702(C)]

b. Particulate Matter

- (1) The Permittee shall not cause or allow to be discharged into the atmosphere the particulate matter in any one hour from the Neutralizer in total quantities in excess of the amounts calculated by the following equation and rounded off to two decimal places: [A.A.C. R18-2-701(23), 702(E)(1), and 730(A)(1)(a)]

$$E = 4.10 P^{0.67}$$

Where:

- E = The maximum allowable particulate emissions rate in pounds-mass per hour.  
P = The process weight rate in tons-mass per hour, which shall be the total weight of nitric acid solution and ammonia introduced into the Liquid Ammonium Nitrate Plant for the entire period of continuous operation of the plant or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

- (2) The Permittee shall not cause or allow to be discharged into the atmosphere from the Ammonium Nitrate Neutralizing Vessel any gases which contain Ammonium Nitrate, expressed as particulate matter, in excess of 10.00 pounds per hour and 43.80 tons per year. [Installation Permit 25017 Condition XII.D]

2. Air Pollution Control Requirements

- a. The Permittee shall maintain and operate a high efficiency wet scrubber on the neutralizer exhaust gases to remove ammonia and ammonium nitrate from the neutralizer exhaust gases. The wet scrubber shall be fully operational upon startup of the neutralizer. [Installation Permit 25017 Condition XII.A and G]

- b. After each performance test required under Subsection IV.B.4 of this Section, the Permittee shall operate the venturi portion of the wet scrubber in such a manner that the pressure differential of the gas stream and the liquid flow rate through the venturi path do not differ by more than  $\pm 30$  percent of the average obtained during the most recent performance test, as measured by the devices required under paragraphs IV.B.3.b(1) and (2) of this Section. [A.A.C. R18-2-306(A)(2) and 306(A)(3)(c)]

3. Monitoring, Record Keeping and Reporting Requirements

- a. Opacity [A.A.C. R18-2-306(A)(3)(c)]

(1) Baseline establishment

Within 180 days of issuance of this Permit, the Permittee shall conduct certified Method 9 performance tests in accordance with Section XVIII of Attachment "A" for the

Neutralizer while it is operating at normal representative working conditions, to establish a baseline opacity level for the stack. Within 30 days of establishing the baseline opacity, the Permittee shall report the results to the Director.

(2) Bi-weekly stack opacity monitoring

- (a) A certified Method 9 observer shall conduct a bi-weekly (once in every two weeks) survey of visible emissions from the Neutralizer when it is in operation. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
- (b) If the observer sees a plume from the Neutralizer stack that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If visibility or other conditions prevent the observation, the observer shall document these conditions.
- (c) If the six-minute opacity of the plume is less than the baseline level, the observer shall make a record of the following:
  - i) name of the observer;
  - ii) stack identification;
  - iii) date, and time of the test; and
  - iv) the results of the method 9 observation.
- (d) If the six-minute opacity of the plume exceeds the baseline level but is less than the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level. The Permittee shall also make a record of the following:
  - i) name of the observer;
  - ii) stack identification;
  - iii) date, and time of the test;
  - iv) the results of the method 9 observation; and
  - v) corrective action taken.
- (e) If the six-minute opacity of the plume exceeds the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level and report the incident as an excess emission for opacity. The Permittee shall also make a record of the following:
  - i) name of the observer;
  - ii) stack identification;
  - iii) date, and time of the test;
  - iv) the results of the method 9 observation;
  - v) corrective action taken; and
  - vi) excess emission report.

(3) Baseline re-establishment

If necessitated by the results of the bi-weekly monitoring, the Permittee may re-establish the baseline opacity level. Re-establishment of the baseline opacity level shall be performed utilizing the same procedures used in setting up the initial baseline level. Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline.

b. Particulate Matter

[A.A.C. R18-2-306(A)(2) and 306(A)(3)(c)]

- (1) The Permittee shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the pressure differential of the gas stream through the venturi portion of the wet scrubber. The monitoring device shall be certified to be accurate within  $\pm 250$  pascals ( $\pm 1$  inch water) gauge pressure by its manufacturer and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.
- (2) The Permittee shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the venturi portion of the wet scrubber. The monitoring device shall be certified by the manufacturer to be accurate within  $\pm 5$  percent of the design scrubbing liquid flow rate and shall be calibrated on an annual basis in accordance with the manufacturer's instructions.
- (3) If the pressure differential of the gas stream or the liquid flow rate through the venturi portion of the wet scrubber is observed beyond the range of  $\pm 30$  percent of the averages obtained in the most recent performance test, the Permittee shall do the following:
  - (a) Initiate corrective actions on the venturi portion of the wet scrubber within 24 hours of the observation to bring the pressure differential of the gas stream or the liquid flow rate back in the range of  $\pm 30$  percent of the averages obtained during the most recent performance test;
  - (b) Log in ink or electronic format and maintain a record of the corrective actions taken. The record shall include the name of the observer, date and time period of the excursion, and date, time and type of the corrective actions; and
  - (c) Include in the semi-annual reports required under paragraph I.G of this Attachment, the excursion occurrences.
- (4) During each performance test described in the following subsection and on a bi-weekly basis after the testing, the Permittee shall record the measurements of both the change in pressure of the gas stream across the venturi portion of the wet scrubber and the scrubbing liquid flow rate.

4. Testing Requirements

[A.A.C. R18-2-306(A)(3), -312(A), and -312(B)]

a. Testing Frequency

- (1) Within 180 days after issuance of this Permit, the Permittee shall conduct a performance test at the Ammonium Nitrate Neutralizer for opacity and ammonium

nitrate, expressed as particulate matter.

- (2) Subsequent performance tests for particulate matter being emitted in the neutralizer exhaust shall be conducted annually.

b. Testing Methods

Performance tests shall be conducted and data reduced in accordance with the following:

- (1) EPA Reference Method 5 shall be used to determine the amount of particulate matter being emitted by the neutralizer.
- (2) EPA Reference Method 9 shall be used to determine the opacity of visible emissions.
- (3) During each performance test, the Permittee shall also measure and record the average gas stream pressure differential across the venturi portion of the wet scrubber, as well as the scrubbing liquid flow rate through the scrubber.  
[A.A.C. R18-2-306(A)(3)(c) and -306(A)(4)]
- (4) For the purpose of Condition IV.B.1.b(1) of this Section, the Permittee shall measure and record production data in pounds-mass per hour for liquid ammonium nitrate, nitric acid, and ammonia.  
[A.A.C. R18-2-306(A)(3)(c) and -306(A)(4)]
- (5) The Permittee shall interpret data and report the final results of each performance test in accordance with Section XVIII, Attachment "A" of the Permit.  
[A.A.C. R18-2-306(A)(5)(a)]

**C. Ammonia Emissions**

1. Emissions Limits and Standards

- a. The Permittee shall not cause or allow to be discharged into the atmosphere from the Neutralizer, any gases which contain ammonia in excess of 10.00 pounds per hour and 43.80 tons per year.  
[Installation Permit 25017 Condition XII.D]
- b. The Permittee shall maintain and operate the liquified ammonium nitrate plant in such a manner as to control the emissions of ammonia and to minimize off-plant odors.  
[Installation Permit No. 25017 Condition XII.C]

2. Air Quality Control Requirements

In addition to operation and maintenance of the wet scrubber prescribed in paragraph IV.B.2.a of this Section, the Permittee shall implement and comply with the provisions specified in Attachment "D" of this Permit, "Ammonia Emissions Reduction Plan", to reduce to the maximum extent practicable, the ammonia emissions including fugitive emissions.

[Installation Permit No.25017 Condition XII.B]

3. Testing Requirements

[A.A.C. R18-2-306(A)(3), -312(A), and -312(B)]

a. Testing Frequency

(1) Within 180 days after issuance of this Permit, the Permittee shall conduct a performance test at the Ammonium Nitrate Neutralizer to determine the ammonia emission rate in pounds per hour.

(2) Subsequent performance tests for ammonia being emitted in the exhaust gases of the Neutralizer shall be conducted annually.

b. Testing Methods

Performance tests shall be conducted and data reduced in accordance with EPA Reference Method 206.

**D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-702(B), 702(C), and 730(A)(1)(a), and Installation Permit 25017 Conditions XII.A, XII.B, XII.C, XII.D, and XII.G in effect on the date of permit issuance.

**V. AMMONIUM NITRATE PRILL PLANT**

**A. Applicability**

This Section is applicable to the following:

1. Ammonium Nitrate Prill Plant (Prill Plant) that consists of the following affected equipment:
  - a. Falling Film Evaporators #1 and #2;
  - b. Prill Tower;
  - c. Prill Plant Rotary Pre-dryer;
  - d. Fluidized Bed Dryer/Cooler;
  - e. Rotex Vibrating Screen;
  - f. Coating Drum;
  - g. Product Storage Barns #1 and #2; and
  - h. All Material Conveying Equipment (Belts and Conveyors)
2. Crystallizer Falling Film Evaporator

**B. Emissions Limits and Standards**

1. Particulate Matter Emissions [A.A.C. R18-2-701(23), 702(E)(1), and 730(A)(1)(a)]
  - a. The Permittee shall not cause or allow to be discharged into the atmosphere the particulate matter in any one hour in total quantities from all stacks of the Prill Plant as defined in paragraph V.A.1 above in excess of the amounts calculated by the following equation and rounded off to two decimal places:

$$E_p = 4.10 P_p^{0.67}$$



Where:

$E_p$  = The maximum allowable particulate emissions rate in pounds-mass per hour for the prill production process.

$P_p$  = The process weight rate in tons-mass per hour, which shall be the total weight of ammonium nitrate solution introduced into the Prill Plant for the entire period of continuous operation of the plant or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

- b. The Permittee shall not cause or allow to be discharged into the atmosphere the particulate matter in any one hour from the crystallizer falling film evaporator in excess of the amounts calculated by the following equation and rounded off to two decimal places:

$$E_c = 4.10 P_c^{0.67}$$

Where:

$E_c$  = The maximum allowable particulate emissions rate in pounds-mass per hour for the crystallizer falling film evaporator.

$P_c$  = The process weight rate in tons-mass per hour, which shall be the total weight of the recycled weak ammonium nitrate solution introduced into the crystallizer falling film evaporator for the entire period of continuous operation of the evaporator or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

2. Visible Emissions

[A.A.C. R18-2-702(B) and 702(C)]

The Permittee shall not cause or allow to be discharged into the atmosphere any plume or effluent from any of the affected equipment under this Section, the opacity of which is greater than 40% as determined by EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

**C. Air Pollution Control Requirements**

[A.A.C. R18-2-306(A)(2)]

1. The Permittee shall operate and maintain two wet cyclones installed at the prill plant rotary pre-dryer to reduce particulate matter emissions from the pre-dryer exhaust.
2. The Permittee shall operate and maintain three wet cyclones installed at the fluidized bed dryer/cooler to reduce particulate matter emissions from the dryer/cooler exhaust.
3. The Permittee shall operate when the talc coating system is in use or as otherwise required, and maintain a baghouse installed to capture dry particulate ammonium nitrate emissions from the coating drum discharge breaching, the upper housing of the bucket elevator to storage, the inlet to the upper belt to storage, and the inlet to the lower belt to storage.

**D. Monitoring, Recordkeeping and Reporting Requirements**

1. Wet Particulate Ammonium Nitrate Cyclones

[A.A.C. R18-2-306(A)(3)(c)]

a. Gas stream pressure and scrubbing liquid flow monitoring

- (1) The Permittee shall continue to calibrate, maintain, and operate the pressure gauge installed at each of the five wet cyclone units sufficient to monitor the gas stream static pressure drop across that unit. The static pressure drop data shall be logged in ink or electronic format; and
- (2) The Permittee shall install within 180 days from the effective date of this permit, and calibrate, maintain, and operate thereafter, five (5) orifice flow flange sets, one for each of the five wet cyclone units sufficient to measure the flow rate of the scrubbing solution introduced to the relevant unit. The Permittee shall further install within the same time frame, a local/remote transmitter with wire back to the control room to monitor instantaneously the scrubbing solution flow rate into each cyclone unit. The flow rate readings shall be recorded onto log sheets, or electronic format.

b. Baseline establishment

- (1) The Permittee shall, under the representative prill plant operating conditions, collect and record daily for a period of 30 consecutive days, the static pressure drop and the scrubbing solution flow rate for each wet cyclone unit, using the monitoring devices described in Paragraphs V.D.1.a(1) and (2) above.
- (2) The average of the 30 consecutive readings for the static pressure drop and scrubbing solution flow rate of each unit shall become the baseline value for that unit, and two standard deviations above and below the baseline value shall become the baseline range for that unit.
- (3) This procedure shall be repeated and a new baseline value created any time the relevant wet cyclone unit is shut down for overhaul.
- (4) The Permittee may elect at any time to reestablish the baseline value using this procedure except that the earlier baseline value shall apply during the period of reestablishment.
- (5) Within 30 days of establishing or reestablishing the baseline value and range, the Permittee shall report the results to the Director.

c. Biweekly monitoring requirements

- (1) The Permittee shall check and record reading of the static pressure drop and the scrubbing solution flow rate at each wet cyclone unit at least biweekly (once every two weeks), and compare the reading to the baseline range.
- (2) If the reading is beyond the baseline range, the Permittee shall do the following:
  - (a) adjust or repair the relevant wet cyclone unit to return the parameters to the baseline range; and
  - (b) record the adjustment or reparation.

## a. Baseline establishment

Within 180 days of issuance of this Permit, the Permittee shall conduct certified Method 9 performance tests in accordance with Section XVIII of Attachment "A" at the stack of the dry particulate ammonium nitrate baghouse while the process equipment associated with the baghouse is operating at normal representative working conditions, to establish a baseline opacity level for the stack. Within 30 days of establishing the baseline opacity, the Permittee shall report the results to the Director.

## b. Stack opacity and particulate matter emissions bi-weekly monitoring

- (1) A certified Method 9 observer shall conduct a bi-weekly (once in every two weeks) survey of visible emissions for the baghouse stack when its associated equipment is in operation. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
- (2) If the observer sees a plume from the baghouse stack that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If visibility or other conditions prevent the observation, the observer shall document these conditions.
- (3) If the six-minute opacity of the plume is less than the baseline level, the observer shall make a record of the following:
  - (a) name of the observer;
  - (b) stack identification;
  - (c) date, and time of the test; and
  - (d) the results of the method 9 observation.
- (4) If the six-minute opacity of the plume exceeds the baseline level but is less than the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level. The Permittee shall also make a record of the following:
  - (a) name of the observer;
  - (b) stack identification;
  - (c) date, and time of the test;
  - (d) the results of the method 9 observation; and
  - (e) corrective action taken.
- (5) If the six-minute opacity of the plume exceeds the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level and report the incident as an excess emission for opacity. The Permittee shall also make a record of the following:
  - (a) name of the observer;
  - (b) stack identification;
  - (c) date, and time of the test;

- (d) the results of the method 9 observation;
- (e) corrective action taken; and
- (f) excess emission report.

c. Baseline re-establishment

If necessitated by the results of the bi-weekly monitoring, the Permittee may re-establish the baseline opacity level. Re-establishment of the baseline opacity level shall be performed utilizing the same procedures used in setting up the initial baseline level. Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline(s).

**E. Performance Test Requirements**

[A.A.C. R18-2-306(A)(3), 312(A) and 312(B)]

1. Testing Frequency

- a. Within 180 days after issuance of this Permit and once a year subsequently during the permit term, the Permittee shall conduct performance tests at the exhaust stacks of the Falling Film Evaporators #1 and #2, the Prill Tower, the Prill Plant Pre-dryer and the Fluidized Bed Dryer/Cooler to determine opacity and particulate matter emission rates in pounds per hour.
- b. The Permittee shall, at least once during the permit term, conduct a performance test at the exhaust stack of the Crystallizer Falling Film Evaporator to determine opacity and particulate matter emission rate in pounds per hour.

2. Testing Methods

Performance tests shall be conducted and data reduced in accordance with the following test methods:

- a. EPA Reference Method 9 shall be used to determine the opacity of visible emissions.
- b. EPA Reference Method 5 shall be used to determine the particulate matter emission rates.
- c. For the purpose of Conditions V.B.1.a and b of this Section, the Permittee shall measure and record the process weight rates in pounds-mass per hour for the ammonium nitrate solution introduced into the Prill Plant and the recycled weak ammonium nitrate solution introduced into the crystallizer falling film evaporator.
- d. The Permittee shall interpret data and report the final results of each performance test in accordance with Section XVIII, Attachment "A" of the Permit.

**F. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-702(B) and (C), 730(A)(1)(a) in effect on the date of permit issuance.

## **VI. FOSSIL-FUEL FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT**

### **A. Applicability**

[A.A.C. R18-2-724(A)]

The following units are affected under this section:

1. Process Steam Boiler #1
2. Process Steam Boiler #2
3. Process Steam Boiler #3
4. AOP-4 Steam Superheater

### **B. Emission Limits and Standards**

#### **1. Particulate Matter Emissions**

[A.A.C. R18-2-724(B) and 724(C)(1)]

The Permittee shall not cause, allow or permit the emissions of particulate matter, caused by combustion of fuel, from any fuel-burning operation in excess of the amounts calculated by the following equation and rounded off to two decimal places:

$$E = 1.02Q^{0.769}$$

where:

E = The maximum allowable particulate emissions rate in pounds-mass per hour.

Q = The heat input in million Btu per hour. For the purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units at the plant shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

#### **2. Visible Emissions**

[A.A.C. R18-2-724(J) and 702(C)]

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any affected facilities of this Section, any plume or effluent, the opacity of which exceeds 15 percent. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

#### **3. Fuel Limitation**

[A.A.C. R18-2-306.A.2]

The Permittee shall only use natural gas as fuel in all the affected facilities under this Section.

### **C. Periodic Monitoring and Record Keeping Requirements**

#### **1. Particulate Matter Emissions Monitoring**

[A.A.C. R18-2-306.A.3.c]

a. The Permittee shall maintain a record that contains the lower heating value of the natural gas fuel in use and the fuel firing rate (cubic feet of natural gas per hour) for each affected facility under this Section.

b. The Permittee shall use the natural gas fuel records described in paragraph (a) above and

the emission factors for fossil-fuel fired equipment from the latest edition of AP-42 to determine, on a bi-weekly basis, the particulate matter emissions from each affected facility under this Section.

2. Periodic Opacity Monitoring

[A.A.C. R18-2-306(A)(3)(c) and -306(A)(4)]

Beginning from issuance of the Permit, a bi-weekly (once in every two weeks) survey of visible emissions shall be conducted by a certified Method 9 observer for each affected facility under this Section.

- a. If the survey indicates an opacity less than 15%, the observer shall record the date, time, location and results of the survey.
- b. If the survey indicates an opacity equal to or greater than 15%, the observer shall immediately conduct a Method 9 observation of emissions. If visibility or other conditions prevent the observation, the observer shall document these conditions.
  - (1) Should the Method 9 observation reveal that the opacity is less than or equal to 15%, the Permittee shall record the name of the observer, date, time, location and result of the observation.
  - (2) Should the Method 9 observation reveal that the opacity is greater than 15%, the Permittee shall immediately take measures as necessary to reduce the opacity to below 15%, as well as record the name of the observer, date, time, location and result of the observation. The Permittee shall then notify the Department of excess emissions as per Section XII of Attachment "A".

3. Maintenance Requirements

[A.A.C. R18-2-306(A)(2)]

The Permittee shall operate the affected facilities of this Section in accordance with vendor-supplied operations and maintenance instructions. If the vendor-supplied operations and maintenance instructions are not available, the Permittee shall prepare and implement an Operation and Maintenance Plan. The Plan shall provide adequate information to properly operate and maintain the affected facilities of this Section in good working order.

**D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-724(B), 724(C)(1), 724(J), and 702(B) and (C) in effect on the date of permit issuance.

**VII. STATIONARY ROTATING MACHINERY**

**A. Applicability**

1. Except as provided in paragraph VII.A.2 below, the affected stationary rotating machineries to which this Section applies are as follows:
  - a. Empire Caterpillar generator engine set at the powerhouse building; and

- b. Caterpillar compressor engine set at the brine concentrator plant.
2. The Ingersoll-Rand (Model 1200, 315-hp) air compressor engine set retained onsite is exempt from the provisions of this Section, except as specified in paragraphs VII.B.1 and 2 of this Section. The Permittee shall not operate the Ingersoll-Rand unit except for emergency use. An "emergency" is defined in XII.C. Emergency Provision, Attachment "A" of this Permit. The Permittee shall demonstrate the emergency to the Department through properly signed, contemporaneous operating logs, or other relevant evidence as required in the "Emergency Provision" section.

## **B. Emissions Limits and Standards**

1. Particulate Matter Emissions [A.A.C. R18-2-719(B) and 719(C)(1)]

The Permittee shall not cause or allow to be discharged into the atmosphere particulate matter in excess of the amount calculated by the following equation and rounded off to two decimal points:

$$E = 1.02 Q^{0.769}$$

where:

E = The maximum allowable particulate emissions rate in pounds-mass per hour.

Q = The heat input in million Btu per hour. For the purposes of this condition, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units at a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

2. Visible Emissions [A.A.C. R18-2-719(E)]

The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any affected facilities of this Section, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity, measured in accordance with EPA Reference Method 9. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

3. Fuel Limitations [A.A.C. R18-2-306(A)(2)]

The Permittee shall only burn natural gas in the engine sets for the powerhouse generator and the brine concentrator plant compressor.

## **C. Monitoring, Recordkeeping, and Reporting Requirements**

1. Particulate Matter Emissions [A.A.C. R18-2-306(A)(3)(c) and 719(I)]

The Permittee shall record daily the quantity and lower heating value of the fuel being fired in each affected machinery under this Section.

- a. A certified EPA Reference Method 9 observer shall conduct a bi-weekly survey of visible emissions emanating from the affected machinery stacks of this Section. If the opacity of the emissions observed appears to exceed the 40 percent standard specified in paragraph VII.B.2 of this Section, the observer shall conduct a certified EPA Reference Method 9 observation. If visibility or other conditions prevent the observation, the observer shall document these conditions. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.
- b. For the purpose of reports under excess emissions reporting required by Section XI.A, Attachment "A" of this Permit, the Permittee shall report any period greater than 10 consecutive seconds during which the smoke from any affected stationary rotating machinery of this Section exceeds 40 percent opacity.

#### **D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-719(B), 719(C)(1), 719(E), 719(F), 719(I), and 719(J) in effect on the date of permit issuance.

### **VIII. STORAGE VESSELS FOR PETROLEUM LIQUIDS**

#### **A. Section General**

##### **1. Applicability**

This Section is applicable to the 3,000 gallon gasoline storage tank identified as Tanks 1763 and the 8,000 gallon Petro-AG storage tank identified as Tank 4170.

##### **2. Definitions**

- a. "Petroleum liquids" means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery but does not mean Number 2 through Number 6 fuel oils as specified in ASTM D-396-90a (Specification for Fuel Oils), gas turbine fuel oils Numbers 2-GT through 4-GT as specified in ASTM D-2880-90a (Specification for Gas Turbine Fuel Oils), or diesel fuel oils Numbers 2-D and 4-D as specified in ASTM D-975-90 (Specification for Diesel Fuel Oils). [A.A.C. R18-2-701(21)]
- b. "Reid vapor pressure" means the absolute vapor pressure of volatile crude oil and volatile non-viscous petroleum liquids, except liquified petroleum gases, as determined by ASTM D-323-90 (Test Method for Vapor Pressure of Petroleum Products ) (Reid Method). [A.A.C. R18-2-701(26)]
- c. "Vapor pressure" means the pressure exerted by the gaseous form of a substance in equilibrium with its liquid or solid form. [A.A.C. R18-2-701(36)]



## **B. Control Device Standards**

[A.A.C. R18-2-710(B) through (D)]

1. Any petroleum liquid storage tank of this Section shall be equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions.
2. All facilities for dock loading of petroleum products, having a vapor pressure of 1.5 pounds per square inch absolute or greater at loading pressure, shall provide for submerged filling or acceptable equivalent for control of hydrocarbon emissions.
3. All pumps and compressors which handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent the release of organic contaminants into the atmosphere.

## **C. Recordkeeping Requirements**

[A.A.C. R18-2-710(E)]

1. The Permittee shall, for each storage vessel under this Section, maintain a file of each type of petroleum liquid stored, of the typical Reid vapor pressure of each type of petroleum liquid stored and of dates of storage. Dates on which the storage vessel is empty shall be shown.
2. The Permittee shall, for each storage vessel under this Section, determine and record the average monthly storage temperature and true vapor pressure of the petroleum liquid stored at such temperature if either:
  - a. The petroleum liquid has a true vapor pressure, as stored, greater than 26 mm Hg (0.5 psia) but less than 78 mm Hg (1.5 psia) and is stored in a storage vessel other than one equipped with a floating roof, a vapor recovery system or their equivalents; or
  - b. The petroleum liquid has a true vapor pressure, as stored, greater than 470 mm Hg (9.1 psia) and is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent.
3. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days.
4. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February, 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependant upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used.

## **D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-710(B) through (E) in effect on the date of permit issuance.

## **IX. NITRIC ACID STORAGE TANKS**

### **A. Applicability**

The Section is applicable to Tanks 56, 57, 95, 96 and any other tanks placed in nitric acid service.

### **B. Visible Emissions Limit**

The Permittee shall not cause or allow to be discharged into the atmosphere any plume from any nitric acid storage tanks of this Section which exhibits an opacity greater than 40%, measured in accordance with EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

[A.A.C. R18-2-702(B) and 702(C)]

### **C. Air Pollution Control Requirement**

The Permittee shall operate and maintain a wet scrubber installed on the vents of the nitric acid storage tanks affected under this Section for minimizing nitrogen oxides emissions of the vent fume and reducing its opacity.

[Permit Revision No. 1001609 to Air Quality Control Permit No. M31143P0-98]

### **D. Monitoring, Recordkeeping and Reporting Requirements**

[A.A.C. R18-2-306(A)(3)(c)]

Beginning from issuance of the Permit, a bi-weekly (once in every two weeks) survey of visible emissions shall be conducted by a certified Method 9 observer for each affected storage tank under this Section.

1. If the survey indicates an opacity less than 40%, the observer shall record the date, time, location and results of the survey.
2. If the survey indicates an opacity equal to or greater than 40%, the observer shall immediately conduct a Method 9 observation of emissions. If visibility or other conditions prevent the observation, the observer shall document these conditions.
  - a. Should the Method 9 observation reveal that the opacity is less than or equal to 40%, the Permittee shall record the name of the observer, date, time, location and result of the observation.
  - b. Should the Method 9 observation reveal that the opacity is greater than 40%, the Permittee shall immediately take measures as necessary to reduce the opacity to below 40%, as well as record the name of the observer, date, time, location and result of the observation. The Permittee shall then notify the Department of excess emissions as per Section XII of Attachment "A".

## **X. COOLING TOWERS**

### **A. Applicability**

This Section is applicable to the following affected facilities: AOP-3 Cooling Tower, AOP-4 Cooling Tower, and Powerhouse Cooling Tower.

## **B. Emissions Limits and Standards**

### **1. Particulate Matter Emissions**

[A.A.C. R18-2-730(A)(1)(a)]

The Permittee shall not cause or allow to be discharged into the atmosphere particulate matter from any affected facility of this Section in excess of the amount calculated by the following equation and rounded off to two decimal points:

$$E = 4.10 P^{0.67}$$

Where:

E = The maximum allowable particulate emissions rate in pounds-mass per hour.

P = The process weight rate in tons-mass per hour, which shall be the total weight of all materials introduced into a process source, where these contribute to particulate matter emissions, for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof. For the purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

### **2. Visible Emissions**

[A.A.C. R18-2-702(B) and 702(C)]

The Permittee shall not cause or allow to be discharged into the atmosphere any plume from the point sources of this Section which exhibits an opacity greater than 40%, measured in accordance with EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of this opacity standard, such exceedance shall not constitute a violation.

## **C. Monitoring, Recordkeeping and Reporting Requirements**

### **1. Baseline establishment**

[A.A.C. R18-2-306.A.3.c]

Within 180 days of issuance of this Permit, the Permittee shall conduct certified Method 9 performance tests in accordance with Section XVIII of Attachment "A" for each stack of the affected facility of this Section while the facility is operating at normal representative working conditions, to establish a baseline opacity level for the stack. Within 30 days of establishing the baseline opacity, the Permittee shall report the results to the Director.

### **2. Stack opacity and particulate matter emissions bi-weekly monitoring**

[A.A.C. R18-2-306.A.3.c]

a. A certified Method 9 observer shall conduct a bi-weekly (once in every two weeks) visual survey of visible emissions from all subject stacks when their equipment are in operation. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation.

b. If the observer sees a plume from any stacks that on an instantaneous basis appears to exceed the baseline opacity level, then the observer shall take a six-minute Method 9 observation of the plume. If visibility or other conditions prevent the observation, the observer shall document these conditions.

- c. If the six-minute opacity of the plume is less than the baseline level, the observer shall make a record of the following:
  - (1) name of the observer;
  - (2) stack identification;
  - (3) date, and time of the test; and
  - (4) the results of the method 9 observation.
- d. If the six-minute opacity of the plume exceeds the baseline level but is less than the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level. The Permittee shall also make a record of the following:
  - (1) name of the observer;
  - (2) stack identification;
  - (3) date, and time of the test;
  - (4) the results of the method 9 observation; and
  - (5) corrective action taken.
- e. If the six-minute opacity of the plume exceeds the 40% opacity standard, the Permittee shall adjust or repair the controls or process equipment as necessary to reduce opacity to below the baseline level and report the incident as an excess emission for opacity. The Permittee shall also make a record of the following:
  - (1) name of the observer;
  - (2) stack identification;
  - (3) date, and time of the test;
  - (4) the results of the method 9 observation;
  - (5) corrective action taken; and
  - (6) excess emission report.

3. Baseline re-establishment

[A.A.C. R18-2-306.A.3.c]

If necessitated by the results of the bi-weekly monitoring, the Permittee may re-establish the baseline opacity level. Re-establishment of the baseline opacity level shall be performed utilizing the same procedures used in setting up the initial baseline level. Within 30 days of re-establishing the baseline opacity, the Permittee shall report the results to the Director. The report shall also contain a description of the need for re-establishing the baseline(s).

**D. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C. R18-2-702(B) and (C), and R18-2-730(A)(1)(a) in effect on the date of permit issuance.

## **XI. NON-POINT SOURCES**

[A.A.C. R18-2-602, -604, -605, -606, -607, -612]

### **A. Emission Limits and Standards**

#### **1. Opacity Standard**

The Permittee shall not cause, allow or permit to be discharged into the atmosphere emissions from any non-point source, which exhibit an opacity greater than 40% as measured in accordance with EPA Reference Method 9. [A.A.C. R18-2-612]

#### **2. Dust Control Work Standards**

The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:

- a. Use approved dust suppressants, adhesive soil stabilizer, paving, covering, detouring, or wetting agents on, or bar access to open areas during construction operations, repair operations, demolition activities, clearing operations, and leveling operations, or when any earth is moved or excavated; [A.A.C. R18-2-604(A)]
- b. Use approved dust suppressants, adhesive soil stabilizer, or paving on, or bar access to driveways, parking areas, and vacant lots where motor vehicle activity occurs; [A.A.C. R18-2-604(B)]
- c. Use approved dust suppressants, temporary paving, detouring or wetting agents when a roadway is repaired, constructed, or reconstructed; [A.A.C. R18-2-605(A)]
- d. Use dust suppressants, wetting agents, or cover the load adequately when transporting material likely to give rise to airborne dust; [A.A.C. R18-2-605(B)]
- e. Use spray bars, hoods, wetting agents, dust suppressants, or cover when crushing, screening, handling, transporting or conveying material that is likely to give rise to airborne dust; [A.A.C. R18-2-606]
- f. Adequately cover, or use wetting agents, chemical stabilization, or dust suppressants when stacking, piling, or otherwise storing organic or inorganic dust producing material; [A.A.C. R18-2-607(A)]
- g. Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material and with the use of spray bars and wetting agents; [A.A.C. R18-2-607(B)]
- h. Use wetting agents or dust suppressants before the cleaning of site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means; or [A.A.C. R18-2-804(B)]
- i. Any other method as proposed by the Permittee and approved by the Director.

#### **3. Open Burning**

[A.A.C. R18-2-602]

Except as provided in A.A.C. R18-2-602.C(1), C(3), and C(4), and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits, the Permittee shall not conduct open burning.

## **B. Monitoring, Recordkeeping, and Reporting Requirements**

### **1. Periodic Opacity Monitoring** [A.A.C. R18-2-306(A)(3)(c), 312(B), and -610]

Beginning from issuance of the Permit, a certified Method 9 observer shall conduct a bi-weekly (once in every two weeks) survey of visible emissions from all non-point sources when they are in operation.

- a. If the survey indicates an opacity less than 30%, the observer shall record the date, time, location and results of the survey.
- b. If the survey indicates an opacity equal to or greater than 30%, the observer shall immediately conduct a Method 9 observation of emissions. If visibility or other conditions prevent the observation, the observer shall document these conditions.
  - (1) Should the Method 9 observation reveal that the opacity is less than or equal to 30%, the Permittee shall record the name of the observer, date, time, location and result of the observation.
  - (2) Should the Method 9 observation reveal that the opacity is greater than 30%, but less than 40%, the Permittee shall immediately take measures to reduce the opacity to below 30%, as well as record the name of the observer, date, time, location and result of the observation.
  - (3) Should the Method 9 observation reveal that the opacity is greater than 40%, the Permittee shall immediately take measures to reduce the opacity to below 30%, as well as record the name of the observer, date, time, location and result of the observation. The Permittee shall then notify the Department of excess emissions as per Section XII of Attachment "A".

### **2. Dust Control Recordkeeping** [A.A.C. R18-2-306(A)(3)(c), and -306(A)(4)]

The Permittee shall maintain records of the dates on which any of the activities listed in XI.A.2 of this Attachment were performed and control measures employed.

### **3. Open Burning Recordkeeping** [A.A.C. R18-2-306.A.3.c]

The Permittee shall maintain copies of all open burning permits on file in compliance with paragraph XI.A.3 of this Section.

## **C. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C., R18-2-602, R18-2-604(A) and (B), R18-2-605, R18-2-606, R18-2-607, R18-2-612 and R18-2-804(B) in effect on the date of permit issuance.

## **XII. MOBILE SOURCES**

### **A. Applicability**

[A.A.C. R18-2-801(A), -802(B)]

The Section is applicable to the following sources:

1. Mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations;
2. Off-road machinery which includes the trucks, graders, scrapers, rollers, locomotives, and other construction and mining machinery not normally driven on a completed public roadway; and
3. Roadway and site cleaning machinery.

### **B. Emissions Standards**

1. Unless otherwise specified, the Permittee shall not cause, allow or permit a mobile source to emit smoke or dust which has an opacity that exceeds 40%. [A.A.C. R18-2-801(B)]
2. No persons shall cause, allow or permit to be emitted into the atmosphere from any off-road machinery or any roadway and site cleaning machinery, smoke for any period greater than 10 consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be expect from this requirement for the first 10 minutes.

[A.A.C. R18-2-802(A) and 804(A)]

### **C. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the requirement(s) of A.A.C., R18-2-801(B), R18-2-802(A), and R18-2-804(A) in effect on the date of permit issuance.

## **XIII. OTHER PERIODIC ACTIVITIES**

### **A. Emission Limits and Standards**

1. Abrasive Blasting [A.A.C. R18-2-726]
  - a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include, but are not limited to:
    - (1) wet blasting; or
    - (2) effective enclosures with necessary dust collecting equipment
  - b. The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 40% opacity, measured in accordance with EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of any visible emissions requirements, such exceedance shall not constitute a violation. [A.A.C. R18-2-702.B and C]
2. Use of Paints

While performing spray painting operations, the Permittee shall comply with the following requirements:

- a. The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C. R18-2-727.A]
- b. The Permittee or his designated contractor shall not either:
  - (1) Employ, apply, evaporate or dry any architectural coating containing photo-chemically reactive solvents for industrial or commercial purposes; or
  - (2) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C. R18-2-727.B]
- c. For the purposes of parts (b) and (e) of this condition, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in paragraphs (1) through (3) of this Subsection, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent: [A.A.C. R18-2-727.C]
  - (1) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: five percent
  - (2) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: eight percent
  - (3) A combination of ethylbenzene, ketones having branched structures, trichloro-ethylene or toluene: 20 percent
- d. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups or organic compounds described in XII.A.2.c(1) through (3), it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents. [A.A.C. R18-2-727.D]
- e. The Permittee shall not dispose by evaporation more than 1.5 gallons of photo-chemically reactive solvent in any one day. [SIP Provision R9-3-527.C]
- f. Visible emissions from spray painting operations shall not have an opacity greater than 40%, measured in accordance with by EPA Reference Method 9. Where the presence of uncombined water is the only reason for the exceedance of any visible emissions requirements, such exceedance shall not constitute a violation. [A.A.C. R18-2-702.B and C]

### 3. Demolition/Renovation

The Permittee shall comply with all of the requirements of 40 CFR 61, Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos). [A.A.C. R18-2-1101.A.8]

### 4. Nonvehicle Air Conditioner Maintenance and/or Services



The Permittee shall comply with the applicable requirements of 40 CFR 82 - Subpart F (Protection of Stratospheric Ozone - Recycling and Emissions Reduction)[40 CFR 82, Subpart F]

5. Gaseous or Odorous Materials Handling

In addition to the specific odor abatement provisions required elsewhere in this Permit, the Permittee shall comply with the following plant-wide requirements:

- a. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.  
[A.A.C. R18-2-730.D]
- b. The Permittee shall process, store, use, and transport materials including solvents or volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure in such a manner and by such means that they will not evaporate, leak, escape, or be otherwise discharged into the atmosphere so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage, or discharge, the installation and usage of such control methods, devices, or equipment shall be mandatory.  
[A.A.C. R18-2-730.F]
- c. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.  
[A.A.C. R18-2-730(G)]

**B. Monitoring, Recordkeeping and Reporting Requirements**

[A.A.C. R18-2-306.A.3.c]

1. Abrasive Blasting

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

2. Use of Paints

- a. Each time a spray painting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:
  - (1) The date the project was conducted;
  - (2) The duration of the project;
  - (3) Type of control measures employed; and
  - (4) Material Safety Data Sheets for all paints and solvents used in the project.
- b. Architectural coating and spot painting projects shall be exempt from the recordkeeping

requirements of part (a) above.

3. Roadway and Site Cleaning Machinery

The Permittee shall keep a record of all emission related equipment maintenance activities performed on roadway and site cleaning machinery stationed at the facility as per manufacturer's specifications.

4. Demolition/Renovation

As a means of demonstrating compliance with condition XIII.A.3 of this Section, the Permittee shall keep a record of all relevant paperwork on file. The relevant paperwork shall include but not be limited to the "NESHAP Notification for Renovation and Demolition Activities" form, and all supporting documents.

5. Nonvehicle Air Conditioner Maintenance and/or Services

As a means of demonstrating compliance with condition XIII.A.4 of this Section, the Permittee shall keep a record of all relevant paperwork to the applicable requirements of 40 CFR 82 - Subpart F on file.

**C. Permit Shield**

Compliance with the terms of this Section shall be deemed compliance with the following applicable requirement(s) in effect on the date of permit issuance: SIP Provision R9-3-527.C, A.A.C. R18-2-702.B, A.A.C. R18-2-702.C, A.A.C. R18-2-726, A.A.C. R18-2-727, A.A.C. R18-2-730.D, A.A.C. R18-2-730.F, A.A.C. R18-2-730.G, A.A.C. R18-2-1101.A.8, and 40 CFR 82 (Subpart F).

**XIV. ANHYDROUS AMMONIA UNLOADING AND STORAGE**

- A. The requirements set forth in 40 CFR 68, Chemical Accident Prevention Provisions, are applicable to the anhydrous ammonia unloading and storage operation at the Permittee's premises for the purpose of prevention of anhydrous ammonia accidental release. [40 CFR 68.215(a)(1)]
- B. The Permittee shall submit as part of the compliance certification submitted under Section VII, Attachment "A" of this Permit, a certification statement that the source is in compliance with all requirements of 40 CFR 68, including the registration and submission of the Risk Management Plan required under 40 CFR 68.150 through 68.190. [40 CFR 68.215(a)(2)(ii)]
- C. The Permittee shall submit any additional relevant information as requested by the Director. [40 CFR 68.215(b)]